

## ABSTRACT

The invention relates to an arrangement for the torque measurement of rotating machine parts with a strain measuring bridge (2) arranged on the rotor, which bridge consists of circuit-connected strain gages. The output signals of the strain measuring bridge (2) are amplified with an amplifier circuit (3) and are converted into frequency-proportional signals in a subsequent or downstream voltage-frequency converter (4). The invention is characterized in that the voltage-frequency converter is embodied as a so-called synchronous voltage-frequency converter (4), which is fed with a quartz-controlled frequency. For the suppression of the so-called frequency jitter, a follow-up synchronization circuit (PLL) (6) is provided after the synchronous voltage-frequency converter (4), which circuit suppresses the alternating frequency of the synchronous voltage-frequency converter (4), so that a frequency signal that is proportional to the analog strain measurement signal is produced at the output. These frequency-modulated measurement signals on the rotor side (14) are inductively transmitted via a transmitter circuit (9) onto a stator, on which an evaluating circuit is provided, which again produces analog signals or corresponding digital signals from the frequency-modulated measurement signals.

(Fig. 1)